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ABSTRACT

The paper for which an abstract is presented here, "Future Network Architectures" (Anthony Rutowski), discussed innovations in processing/switching and transmission technologies, including the development of new broadband optical transfer modes using label and position multiplexing techniques. It is suggested that future network architectures will likely be an open complex of physical and virtual fabrics, employing optical backbones, with significant storage, processing, and low-level formatting functions, and that they will exist in the public networks as powerful national resources. (Author/EW)

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TELECOMMUNICATIONS POLICY RESEARCH CONFERENCE

Future of the Telecommunications Network Section

Airlie, Virginia

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FUTURE OF THE TELECOMMUNICATIONS NETWORK
Chair: Dean Gillette

Anthony Rutowski: Future Network Architectures

Processing/switching and transmission technologies and costs have changed so dramatically and the functions merged so completely that most contemporary telecommunication networks, public and private, are now simply geographically distributed computer systems optimized for information transport.

Within professional network planning forums, domestically and internationally, these changes have manifested themselves in the form of an emerging aggregate environment of interoperating public and private ISDNs, dedicated networks, disparate terminals/CPE, signalling and OA&M systems, and applications - a "national public information fabric."

During the past six months, however, many of these developments have themselves been eclipsed by the development of new broadband optical transfer modes (ATD and STD) using label and position multiplexing techniques that provide at a basic rate of 150 Mbit/s, and have become the global network imperative.

Future network architectures will likely be an open complex of physical and virtual fabrics, employing optical backbones. Significant storage, processing and low-level formatting functions will exist in the public networks as powerful national resources. Open network architectures - effected by uniform, stable, characteristics for an ubiquitous, minimal set of interfaces, functionalities, and seamless cost-effective offerings - will likely be a key feature.

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